



Elements of IPM for Dairy Cattle in New York State

MAJOR PESTS

Insects	
house fly	horn fly
stable fly	deer fly
face fly	horse fly

This is a checklist of items to help you develop or analyze whether you use IPM for flies in your dairy operation. If the IPM practice listed below is used across the farm then check it off and give yourself the all the points. If not, no points should be awarded. To be considered an IPM farm you must have 80% of the points accumulated.

IN AND AROUND ANIMAL FACILITIES (Barn and Calf Areas)

MAJOR PESTS: House Fly, Stable Fly

Site Preparation

Activity	Possible Points	Check if Yes	Farmer Total
Allow for adequate drainage in and around animal facilities.	5		
Allow for ease of access for removing manure, soiled bedding, and spilled feed.	5		
Keep feed bunks, silos, feed storage areas clean and dry.	10		
Check and repair leaky watering systems.	10		
Keep watering areas clean of excess organic matter.	10		
Manure removed and bedding changed daily, or at least once per week.	10		
Bedded packs: keep area dry, add fresh bedding material regularly.	5		
Use bedding that does not produce many flies (sand, sawdust, wood chips, etc.).	15		
Stanchion resting stall manure drops cleaned out once daily.	10		
Provide adequate ventilation to help facilitate dry conditions.	10		
Put screens on barn windows if possible.	5		
Maintain a fly-free milk room: screens and tightly closing screen doors, minimal traffic, sticky tapes, light traps, proper insecticides.	10		
Spread manure and bedding as thinly as possible.	10		
Orient calf hutch or facility to provide adequate ventilation and help facilitate dry conditions.	10		
Regularly mow vegetation around dairy facility including barns, calf areas, silos, etc.	5		
Disinfect hutch or facility between calf uses.	5		
Possible total	135	Farmer Total	

Pest Monitoring and Forecasting

Activity	Possible Points	Check if Yes	Farmer Total
Conduct a farm wide fly pest survey.	15		
Visual observations for house and stable flies on animals, structure (posts, walls, windows, etc.), bedding, and feed.	5		
Identify potential fly breeding sites where moist organic matter accumulates, particularly those areas difficult to clean.	5		
Monitor potential fly breeding sites weekly. Keep a record of fly breeding “hot spots”.	5		
Monitor animal behavior for excessive foot stomping, tail switching, reduced feeding, or other signs of animal discomfort.	5		
Use 3x5 spot cards or 2 inch sticky traps and thresholds to objectively monitor house fly populations at different stations in the barns. The threshold is 100 spots/card or 250/sticky trap; change and date weekly.	20		
Count the number of stable flies on at least 15 cattle to determine thresholds to objectively monitor stable fly populations (threshold= 10 flies/animal on legs)	20		
Possible total	75	Farmer Total	

Pest Management

Activity	Points	Check if Yes	Farmer Total
Utilize sound sanitation, moisture and organic matter management to minimize or eliminate conditions favorable for fly breeding and fly population buildup.	20		
Utilize sticky ribbons, paper, or tapes where practical.	20		
Use of stable fly alsynite traps around the barns	20		
Utilize insecticide bait stations where practical.	5		
Use of biological control releases (<i>Muscidifurax raptor</i> and <i>Muscidifurax raptorellus</i>) to enhance barn fly management.	20		
Calibrate sprayer(s) before use.	5		
Use residual premise and space sprays only when an action threshold is reached.	5		
Choose effective pesticides that preserve natural enemies.	5		
Utilize insecticide bait stations where practical.	5		
Keep records of pest densities, pesticide applications, cultural pest management practices, and biological control techniques used.	5		
Possible total	110	Farmer Total	

ANIMALS ON PASTURE

MAJOR PESTS: Face Fly, Horn Fly, Stable Fly, Deer Fly, Horse Fly

Site Preparation

Activity	Points	Check if Yes	Farmer Total
Minimize or eliminate direct animal access to streams and ponds.	10		
Allow for adequate drainage in and around watering areas.	5		
Allow for ease of access for cleaning around feed bunks and feed racks.	5		
Keep feeding areas clean and dry.	15		
Check and repair leaky watering systems.	15		
Provide enclosed building for relief from horn, face, deer, and horse flies.	10		
Possible total	60	Farmer Total	

Pest Monitoring and Forecasting

Activity	Points	Check if Yes	Farmer Total
Use action thresholds for face, stable and horn flies on animals: face flies, 10 per animal; horn flies, 100 flies/side; stable flies, 10 flies on all 4 legs of the animal.	20		
Monitor animal behavior for excessive crowding, tail switching, reduced feeding, gadding or other signs of animal discomfort.	5		
Possible total	25	Farmer Total	

Pest Management

Activity	Points	Check if Yes	Farmer Total
Utilize sound sanitation, moisture and organic matter management near feed bunks and water sources to minimize or eliminate conditions favorable to stable fly population buildup.	5		
Use non-toxic fly pasture trapping technology.	15		
Choose effective pesticides that are appropriate to animal age group and other restrictions.	5		
Calibrate sprayer(s) before use.	5		
Only use insecticides when action thresholds have been met.	15		
Use nontoxic fly repellents when possible.	15		
Use a Bruce trap (walk through) for horn flies.	5		
Identify if a pasture has a good population of dung beetles competing with flies for manure pat habitat.	5		
Utilize self-application insecticide (back rub) stations where practical.	5		
Using insecticide ears tags for non-lactating animals exposed to face and horn flies when exceeding threshold levels.	5		
Keep records of pest densities, pesticide applications, cultural pest management practices, and other control techniques used.	10		
Possible total	90	Farmer Total	

Bonus Pasture

Activity	Possible Points	Check if Yes	Farmer Total
Use the CowVac for horn flies.	20		
Drag pastures weekly with a chain or tine harrow to spread manure pats to reduce fly populations.	5		
Use poultry to control pasture flies in manure pats.	10		
Possible total	35	Farmer Total	

Calculate Total Points Earned - 80% Needed to Qualify for Certification

Facility -Barns and Calves	Possible Points	Farmer Total
Site Preparation	135	
Pest Monitoring and Forecast	75	
Pest Management	110	
TOTAL	320	

On Pasture	Possible Points	Farmer Total
Site Preparation	60	
Pest Monitoring and Forecast	25	
Pest Management	90	
Bonus	35	
TOTAL	175	

Grand Total	Possible Points	Farmer Totals Facility + Pasture
TOTAL Facility and Pasture points	495 + 35 Bonus Points	
Points to Certify	396	

To Learn More

Specific information about the use of these IPM elements can be found in the following publications:

NYSIPM Cattle Publications: nysipm.cornell.edu/agriculture/livestock-and-field-crops/publications

NYSIPM Cattle Videos: youtube.com/playlist?list=PLC307D9A62CA393C8

References

2016 Integrated Pest Management Guide for Organic Dairies, hdl.handle.net/1813/42899

Pest Flies of Pastured Cattle and Horses, hdl.handle.net/1813/42382

Pest Management Recommendations for Dairy Cattle, hdl.handle.net/1813/42361